



State of Utah

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Department of Environmental Quality

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DIVISION OF WATER QUALITY
Walter L. Baker, P.E.
Director

*Incoming
M/045/0049
cc: Leslie*

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January 28, 2010

Desert Hawk Gold Corporation
C/o Rick Havenstrite
8921 North Indian Trail Road, Suite 288
Spokane, WA 99208

Dear Mr. Havenstrite:

Subject: Construction Permit for Cactus Mill Copper Leach Pilot Project, Tooele County, UT

On October 15, 2009, the Division of Water Quality (DWQ) received a submittal from North American Exploration, Inc. for constructing the following facilities for a pilot copper heap leach operation: a leach cell; evaporation pond; perimeter berm; precipitation tank; and concrete containment area for the leach water. The same submittal was provided to the Division of Oil, Gas and Mining (DOGM) as a Notice of Intention to Amend Large Mining Operations for the Cactus Mill Application (M/045/0049).

The plans and specifications in the October 15, 2009 submittal included a composite liner system comprised of a 12-inch clay subliner overlain with a 60-mil synthetic primary liner. However, the plans did not specify the type of synthetic material and did not include any construction quality assurance/quality control (CQA/QC) specifications or testing requirements. These deficiencies were discussed with Rick Havenstrite and Doug Jensen during a December 29, 2009 conference call. To address these deficiencies, Mr. Havenstrite responded with an email on January 5, 2010, which included the following conditions and specifications:

- Subgrade will be scarified and recompact to 90% Modified Proctor;
- Ten (10) compaction tests will be conducted during placement of the clay subliner;
- The synthetic primary liner will be high density polyethylene (HDPE); and
- A CQA/QC manual was provided for the HDPE liner installation.

During a site visit on January 14, 2010, Woodrow Campbell, DWQ P.E., witnessed the damage caused by recent flooding events. As a result, it was agreed that the following additional construction elements would be included to prevent flooding from damaging the new leach cell and evaporation pond.

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Div. of Oil, Gas & Mining

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Soil Subgrade

- Proctor Curves,
- Soil Classification,
- Field Compaction Testing, and
- Subgrade Acceptance Certification.


HDPE Liner

- Panel Placement Log,
- Trial Seam Test Log,
- Seaming Record,
- Seam Test Record,
- Repair Log,
- As-Built Drawing,
- Manufacturer Certification including QA/QC Testing of the Rolls, and
- Professional Engineer Certification.

If we can be of further assistance, please contact Mr. Woodrow Campbell at (801) 538-6067 or wwcampbell@utah.gov.

Sincerely,

UTAH WATER QUALITY BOARD



Walter L. Baker, P.E.
Executive Secretary

WLB/WWC:rfh

cc: **Leslie Heppler, UDOGM**
Tooele County Health Department